

Use Attainability Analysis
for
Water Body Identification # 3094
Ditch # 8

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: July 14, 2005



Stream Description – WB ID: 3094 – Ditch #8

Ditch #8 is a 20.5 mile Class C stream located in southern Stoddard and northern New Madrid Counties. This water body is located in the Mississippi Lowlands physiographic region (Thom and Wilson 1980), which is characterized by rich alluvial soil and relatively level topography. The water body flows straight south to southwest from County Road 732 to County Road 262 and it eventually joins Ditch # 9 before entering the floodway. The conditions surrounding the water body is primarily crop land, with a small number of residences scattered along the reach. The primary use for this stream is agricultural drainage, which is evident in the numerous drainage pipes can be seen throughout the classified reach. These drainage pipes allow excess irrigation water to enter the stream, which can make a substantial difference in stream water depth when fields are being irrigated.

This classified reach is the receiving water body of the waste water treatment facilities (WWTF) for the cities of Parma (population 852) and Risco (population 392). County roads run along either one side or the other for approximately half the length of the water body providing for ample locations for assessments. This also allowed the field team to visually assess physical conditions and the recreational usage for over 50 percent of the entire length of the water body on each visit.

Thom, R. H. and J. H. Wilson. 1980. The Natural Divisions of Missouri. Trans. Mo. Acad. Sci. 14: 9-23.

Note: During the first visit to each site, ERC selected an assessment location (either upstream or downstream) based on which side appeared deepest and or most likely for whole body recreation.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A: Water Body Identification

Water Body Name: Ditch # 8
8 – digit HUC: 08020204
Missouri WBID # 3094
County: Stoddard and New Madrid Counties
Upstream Legal Description: Sec. 1, T24N, R11E, Stoddard County
Downstream Legal Description: Sec. 12, T21N, R11E, New Madrid County
Upstream Coordinates: Latitude 36.7596524° N , Longitude 89.8127401° W
Downstream Coordinates: Latitude 36.4809496 ° N , Longitude 89.8270420 ° W
Discharger Facility Name(s): Parma WWTF and Risco WWTF
Discharger Permit Number(s): MO0039900 and MO0025852
Number of Sites Evaluated: 4
Name of Surveyor and Telephone Number: Robert R. Bacon, (573) 634-7078
Organization: Environmental Resources Coalition (ERC)
Position: Director of Aquatic Services

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA sheet is true and accurate.

Signed: Robert R. Bacon

Date: 7-14-2005

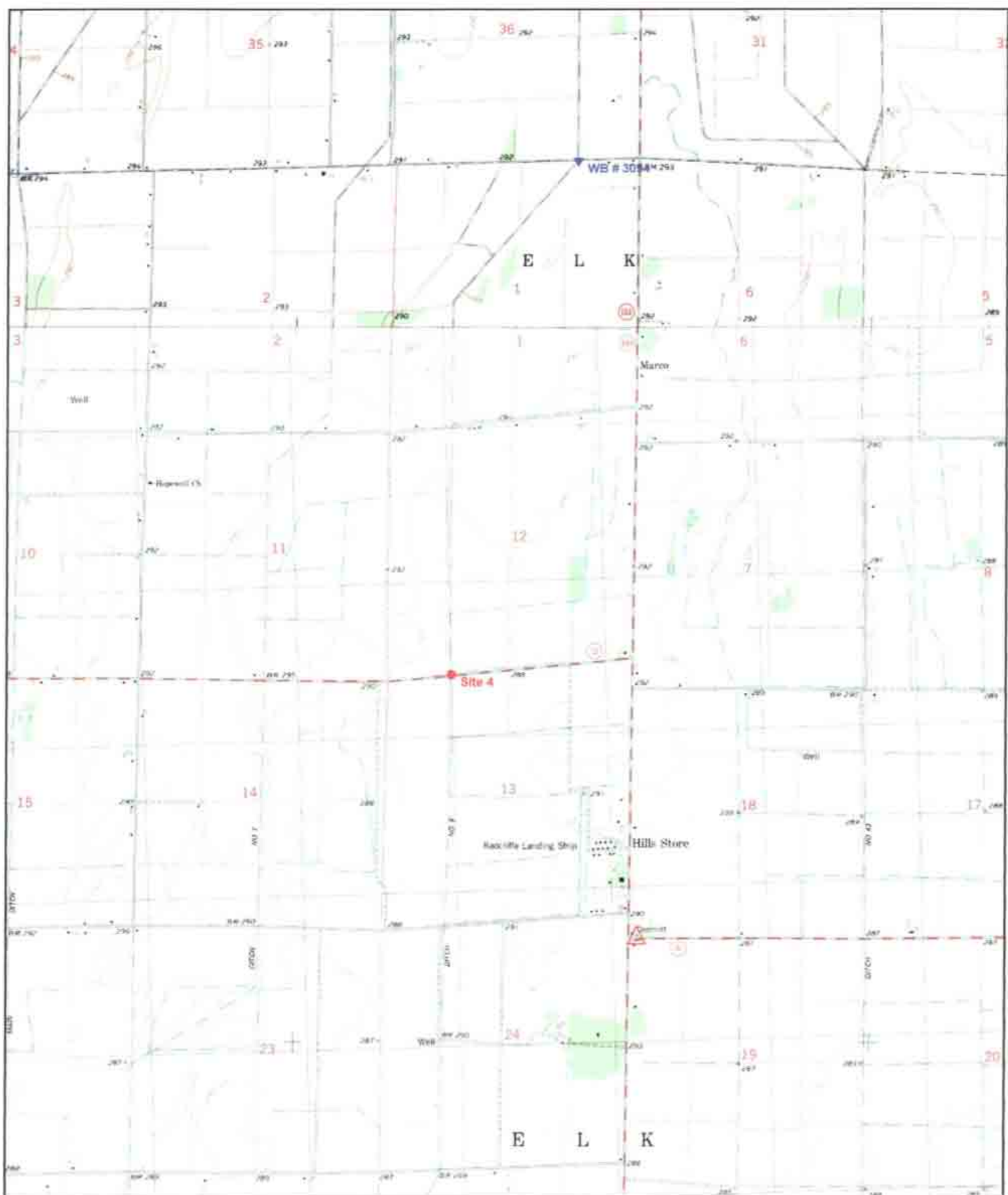
Weather Conditions

Weather conditions for the field surveys and the previous ten days are listed in the tables below.

Data from the Midwestern Regional Climate Center
Malden Municipal Airport, Station ID: 235207

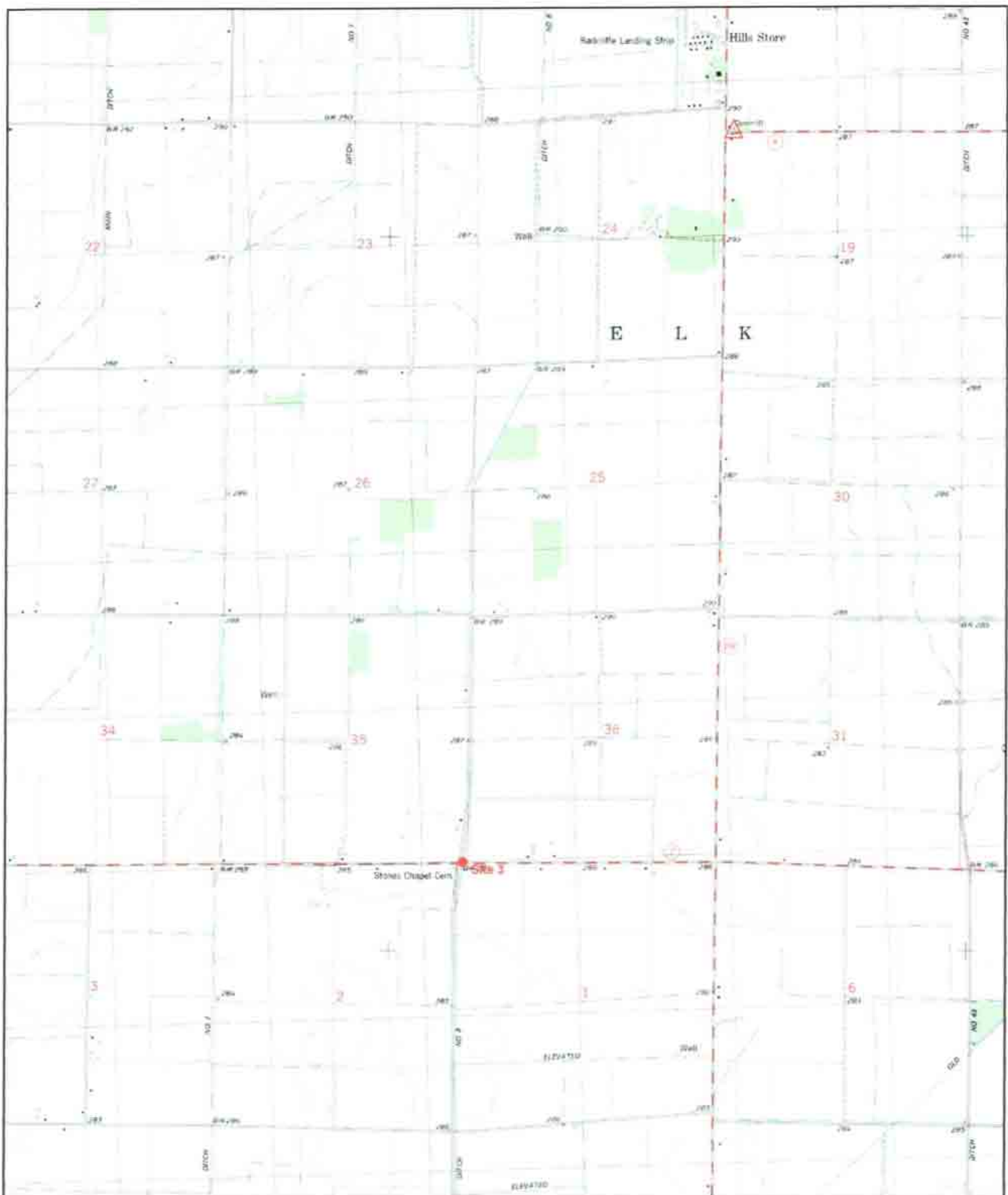
Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
04/05/2005	0	54	74	64
04/06/2005	0.31	56	73	65
04/07/2005	0.13	56	64	60
04/08/2005	0.26	52	62	57
04/09/2005	0	52	63	58
04/10/2005	0	54	69	62
04/11/2005	0	54	79	67
04/12/2005	0.85	57	65	61
04/13/2005	0.03	51	67	59
04/14/2005	0	45	55	50
04/15/2005	0	45	67	56

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/23/2005	0.01	63	89	76
05/24/2005	0	56	73	65
05/25/2005	0	56	64	60
05/26/2005	0	52	62	57
05/27/2005	0	52	63	58
05/28/2005	0	54	69	62
05/29/2005	0	54	79	67
05/30/2005	0	57	65	61
05/31/2005	0	51	67	59
06/01/2005	0	45	55	50
06/02/2005	0	45	67	56



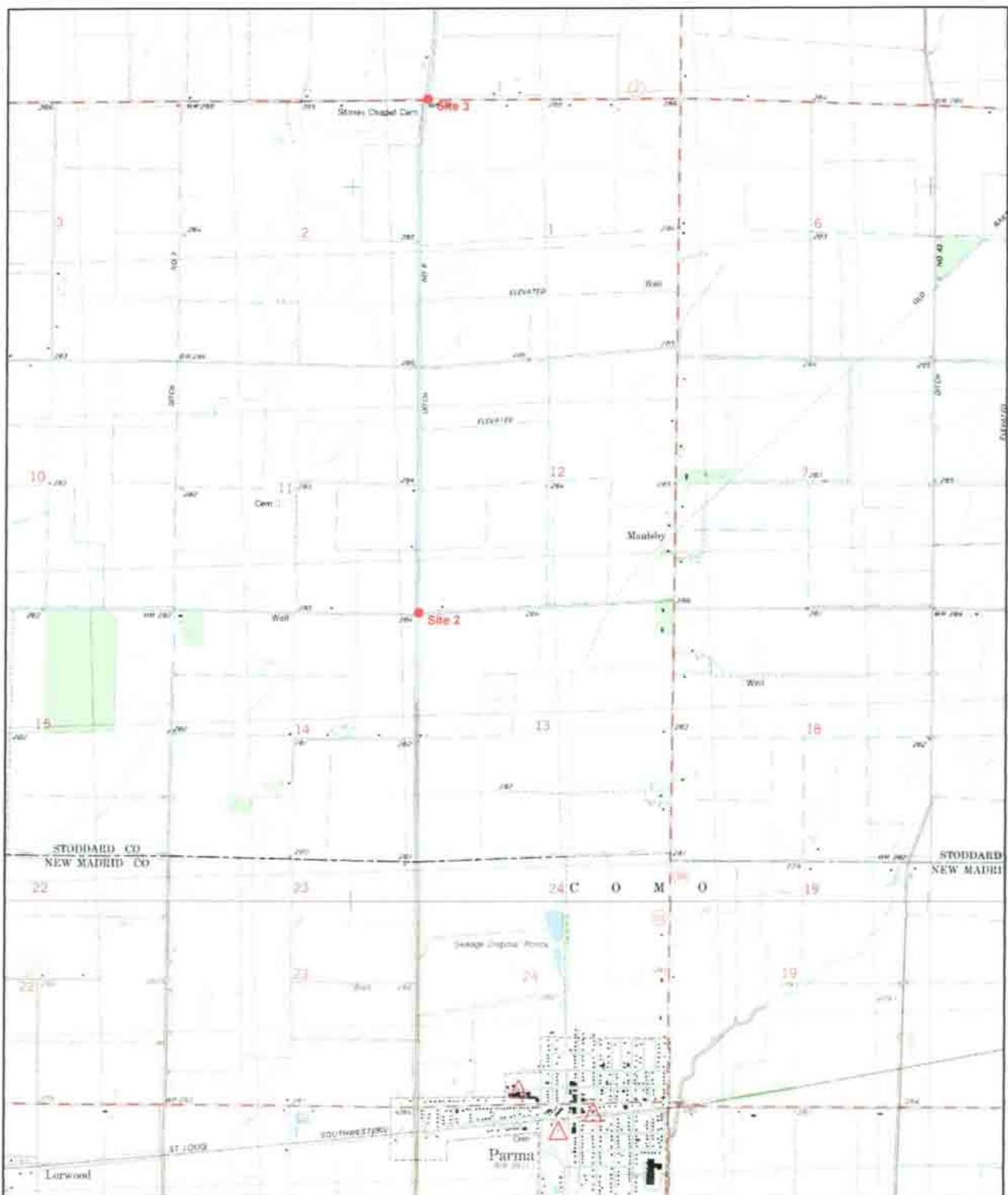
Name: ESSEX
Date: 7/11/2005
Scale: 1 inch equals 2500 feet

Location: 036.7339204° N 089.8179723° W



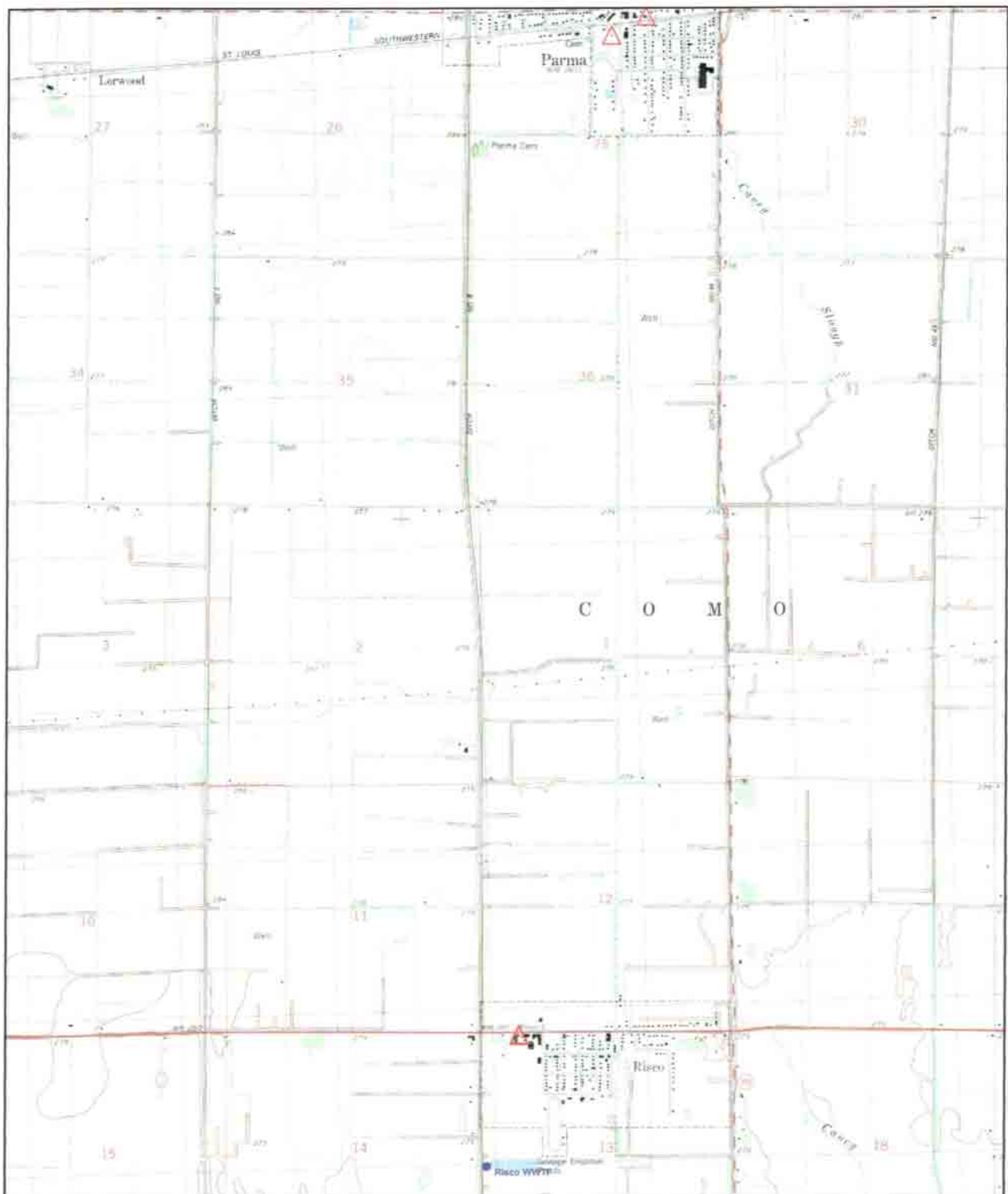
Name: HILLS STORE
 Date: 7/11/2005
 Scale: 1 inch equals 2500 feet

Location: 036.6869756° N 089.8249010° W



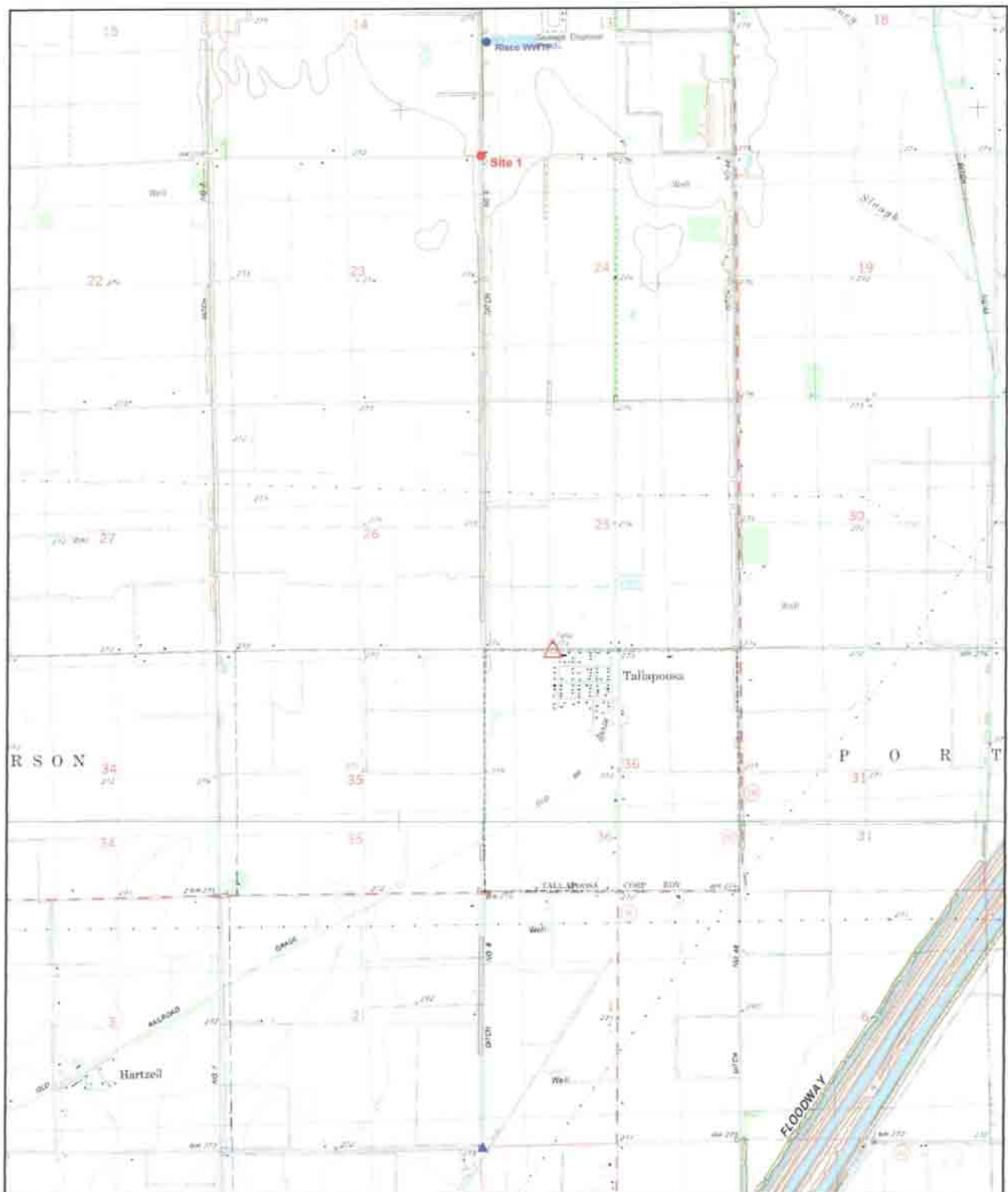
Name: HILLS STORE
 Date: 7/11/2005
 Scale: 1 inch equals 2500 feet

Location: 036.6424297° N 089.8222169° W



Name: PARMA
Date: 7/11/2005
Scale: 1 inch equals 2500 feet

Location: 036.5785536° N 089.8257526° W



Name: PARMA
Date: 7/11/2005
Scale: 1 inch equals 2500 feet

Location: 036.5128883° N 089.8255461° W

WB # 3094 – Ditch # 8

Site # 1 - Jct of Co Rd 240 & Co Rd 242

GPS Location

36.5389696 North

89.8274888 West

Elevation (feet)

348.1

Upstream Views

04/16/05



06/03/05



Downstream Views

04/16/05



06/03/05



Physical Dimensions – Site # 1

	04/16/05	06/03/05
Assessment Location	Downstream	Downstream
Time	9:30AM	12:15 PM
Stream Type	Run	Run
Width (m)	8.71	9.75
Length (m)	402.34	402.34
Ave Depth (cm)	26.33	44.88
Maximum Depth (cm)*	69.0	81.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	0%	0%
Silt	90%	0%
Mud / Clay	10%	100%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	Fishing observed – see pictures
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	40% emergent vegetation	40% periphyton

Water Characteristics

Odor	None	None
Color	Turbid	Clear
Bottom Deposits	Fine sediments	None
Surface Deposits	Oil residue	Foam

* Maximum depth is maximum measured depth within the stream cross-section

NOTES: Site # 1 is the lower-most point on Ditch # 8

**Evidence of Human Use Photos
WB 3094 - Site # 1**

06/03/05



06/03/05



The above pictures are of a man fishing using both pole and line and trotline methods. He stated that he comes to the water body a few times a summer to fish. He also noted that he is fully aware that the WWTF discharges into the stream.

WB # 3094 – Ditch # 8

Site # 2 - Jct of Co Rd 779 & Co Rd 784

GPS Location

**36.6417819 North
89.828569 West**

Upstream Views

04/16/05



06/03/05



Downstream Views

04/16/05



06/03/05



Physical Dimensions – Site # 2

	04/16/05	06/03/05
Assessment Location	Downstream	Downstream
Time	9:55 AM	12:00 PM
Stream Type	Run	Run
Width (m)	4.83	6.10
Length (m)	402.34	402.34
Ave Depth (cm)	19.56	40-45 approx
Maximum Depth (cm)*	28.0	48.0 approx
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	30%	0%
Sand	10%	0%
Silt	60%	0%
Mud / Clay	0%	100%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	10% plant cover	None

Water Characteristics

Odor	None	None
Color	Turbid	Clear/slightly turbid
Bottom Deposits	Fine sediments	None
Surface Deposits	None	None

* Maximum depth is maximum measured depth within the stream cross-section

NOTES:

06/03/05 - Stream assessment was taken from the bridge on this date due to snakes being too numerous and aggressive to safely enter stream. Depth measurements were taken from the bridge and were estimated to be approximately 45 cm deep – based on visual assessment.

WB # 3094 – Ditch # 8

Site # 3 - Off Hwy Z & Co Rd 779

GPS Location

**36.6718185 North
89.8280047 West**

Upstream Views

04/16/05



06/03/05



Downstream Views

04/16/05



06/03/05



Physical Dimensions – Site # 3

	04/16/05	06/03/05
Assessment Location	Downstream	Downstream
Time	10:15 AM	11:17 AM
Stream Type	Run	Run
Width (m)	4.37	5.79
Length (m)	402.34	402.34
Ave Depth (cm)	8.88	37.40
Maximum Depth (cm)*	64.0	16.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	40%	0%
Silt	50%	40%
Mud / Clay	10%	60%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	15-20% cover	None

Water Characteristics

Odor	None	None
Color	Turbid	Clear
Bottom Deposits	Fine sediment	None
Surface Deposits	None	None

* Maximum depth is maximum measured depth within the stream cross-section

NOTES:

04/16/05 - thick layer of fine sediment on the bottom of the ditch was noted.

06/03/05 - Irrigation return flow can be seen in upstream view picture on this date entering the stream from a drainage pipe.

WB # 3094 – Ditch # 8

Site # 4 - Hwy D

GPS Location

**36.7297127 North
89.8219214 West**

Upstream Views

04/16/05



06/03/05



Downstream Views

04/16/05



06/03/05



Physical Dimensions – Site # 4

	04/16/05	06/03/05
Assessment Location	Downstream	Downstream
Time	10:25 AM	10:46 AM
Stream Type	Run	Run
Width (m)	3.66	3.66
Length (m)	402.34	402.34
Ave Depth (cm)	6.46	18.23
Maximum Depth (cm)*	15.0	26.0
Flow Present	No	No
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	0%	0%
Sand	40%	0%
Silt	50%	70%
Mud / Clay	10%	30%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	15-20% cover	50% filamentous algae

Water Characteristics

Odor	None	Dead animal smell
Color	Lightly turbid	Clear
Bottom Deposits	Some fine sediments	None
Surface Deposits	None	None

* Maximum depth is maximum measured depth within the stream cross-section

NOTES:

06/03/05 - Several rotting animal carcasses were discarded on the bank of the water body.

Site Descriptions

Site #1: Site #1 of Ditch #8 is located at the junction of County Road 240 and County Road 242. This is the lowermost site of the reach and is downstream from the City of Risco Waste Water Treatment Facility. Steep banks and occasional dense plant growth make access to the water body difficult. Farm fields surround the area. A large amount of garbage, including appliances, mattresses, barrels, and barbeque grills, has been dumped in the water body. Surface deposits were observed during each visit to this site (April 16th oily residue, and June 3rd foam).

Site #2: Site #2 of Ditch #8 is located at the junction of County Road 779 and County Road 784. Farm fields surround the area, and there are two residences within walking distance. The water body has very steep banks and dense to moderately dense bank vegetation at this site making access difficult. During the June 3rd visit, two large snakes were observed in the water, and only a visual assessment was conducted.

Site #3: Site #3 of Ditch #8 is located at Highway Z and County Road 779. Farm fields surround the area, and there is one residence within walking distance. A considerable amount of trash was noted on the banks of the water body.

Site #4: Site #4 of Ditch #8 is located on Highway D. Steep banks line the water body, and the surrounding area consists of farm fields.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on the UAA datasheets, are true and accurate.

Signed: Robert R. Brown

Date: 7-14-2005

Organization: ERC

Position: Dir. of Aquatic Services

Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer and Anna Welschmeyer with landowners and creek users during the months of April and June of 2005. Questions were asked of the interviewee either in person or over the phone. Survey sheets were completed based on the information acquired by the interviewer. The questions asked are as follows:

- How long have you lived near this body of water?
- Do you or your family utilize this body of water for recreational activities?
- If not used, why?
- If used, what types of activities, what seasons, how many times per period, and what flow conditions (low, medium, or high)?
- Have you witnessed other people utilizing the water body? (If so, the aforementioned questions apply.)

To assist in the collection of interviews, letters were developed detailing the water quality rule, our affiliation with the Missouri Department of Natural Resources and our contact information. These letters were left at residences nearby the water body where no one answered the door. This turned out to be a very effective way of quickly collecting key interviews of people most familiar with the resource.

Date: 06/03/05

Time: 12:14 PM

Name: Wayne Johnson

Reason for Interview: fishing at site #1

Wayne Johnson has lived near Ditch # 8 for 40 years. He uses the water body to fish, but never enters the stream due to numerous cottonmouths. Mr. Johnson commented that the depth of the water body was greater than normal due to local crop irrigation. He said he has seen locals fishing and frog gigging around the ditch during the summer.

Date: 06/03/05

Time: 11:55 AM

Name: Jeffrey Johnson

Reason for Interview: lives near site #2

Jeffrey Johnson has lived near Ditch # 8 for 34 years. He does not use the water body for recreation because of the large snake population. Mr. Johnson commented that locals will fish from bridges and culverts during the summer months if the water level is sufficient.

Summaries of Interviews (cont'd)

Date: 06/03/05

Time: 11:33 AM

Name: Bob Lowrey

Reason for Interview: visiting house at site # 3 – lives down gravel road along ditch

Bob Lowrey has lived near Ditch # 8 for 35 years, and was on the Ditch # 8 board for 25 years. He stated that he does not use the water body for recreation because there is normally not enough water running in the ditch. He stated that when local farmers are not irrigating their fields, it is possible to run an ATV up and down the stream. Mr. Lowrey said he has not seen anyone else using the water body for recreation, but he suspects illegal hunting for turtles is occurring.

Date: 06/03/05

Time: 11:26 PM

Name: Luke Carter

Reason for Interview: scouting rice field near site #3

Luke Carter has lived in the vicinity of Ditch # 8 for 20 years and has scouted rice fields on the ditch for 2 years. He stated that he does not use the water body for recreation because it is "nasty." Mr. Carter stated that he has occasionally seen people fishing at the stream.

Date: 06/03/05

Time: 11:14 AM

Name: Debbie Bailey

Reason for Interview: lives near site #4

Debbie Bailey has lived near Ditch # 8 for one year. She does not use the water body for recreational activities, nor has she seen anyone else using it. "It's nasty. It's not something I would want to get in." Ms. Bailey commented.

Summaries of Interviews (cont'd)

Date: 06/03/05

Time: 11:04 AM

Name: Carrell Odom

Reason for Interview: lives near site #4

Carrell Odom has lived near Ditch # 8 for 26 years. She stated that she does not use the water body for recreational purposes because its depth is unreliable, meaning that it is either empty or raging with water. Ms. Odom stated that she has not seen other people recreating in the water body, and it is mainly used by people to dump their trash.

Date: 06/03/05

Time: 9:29 AM

Name: Shelley Hollis

Reason for Interview: lives along Ditch #6

Shelley Hollis has lived in the area for 26 years. She currently lives along Ditch # 6, but has resided along Ditch # 8 in the past. She stated that she did not use the water body for recreation because of snake infestation. She emphatically stated that people do not recreate in the ditch for safety reasons, but some locals will fish periodically.